Math Skills Interesting Transcontinental Railroad Facts

PROBLEMS	ANSWERS
• Approximately one in ten Chinese workers died from accidents or the cold. If you have frostbite and are losing fingers and toes at the same ratio, how many would you lose?	
• One mile of track contained: **202** **+150** rails **1,750** **x 2** ties **7,000** **5,250** **+1,750** nuts & bolts **14,000** **x 2** **+100**	
• The Pacific Railway Act of _____(**one thousand eight hundred and sixty four**) allowed the railroad companies to issue their own bonds and doubled the land grants.	
• **3 x 5**= _____ tunnels were built between Sacramento and Promontory Summit.	
• Only **99 – 4** _____+ **5** _____- **96** = _____tunnels were built between Omaha and Promontory Summit.	
• East Tunnel, built by the Union Pacific, was 772 feet long and used 1,064 kegs of black powder to create. On average how many kegs per foot were used?	
• **3 x 10**_____ + **3 + 4** =_____ snow sheds were built to keep snow off the tracks.	
• Summit Tunnel took two years to complete. It was 1,659 feet long. How many feet were completed on average each day? _____	
• The railroads overlapped for 80 miles before a spot was chosen by Congress to meet. At the rate of pay of $32,000/mile how much would a company lose if their overlapping track was not used?	

• The Union Pacific laid 992 miles of track from Omaha, Nebraska to Promontory Summit, Utah. If the lowest rate ($16,000/mile) for level land east of the Rockies is used, what is the minimum amount the Union Pacific should have been paid?	
• The golden spikes and special laurel tie were immediately removed and replaced by normal ones after the press show. The last spike was made of 88/5 = carat gold and weighed 109 x 4= _____ grams.	
• A gold nugget on the end of the spike made rings for President Ulysses S. Grant, Secretary of State William Seward, Governor Stanford and others. If each ring contains at least 4 grams of gold, what was the minimum weight of the gold nugget?	
• The Central Pacific Railroad paid the voyage from China to California for imported workers; but the workers had to pay the company back out of their wages. A voyage was $40 by steamship and $35 by sailboat. Approximately how long would it take a Chinese worker to pay back each voyage with a wage of $35 per month? (Assume 30 days in a month)	
• The rails had to lay exactly 56 inches apart. This is _____**feet inches**.	
• Fishplates are metal plates that bolt together to hold the ends of rails together. How many fishplates would be needed for one mile of track? (Note one fishplate is needed to bind two rails together.)	
• The message "done" was sent out by telegraph nationwide to announce the completion of the railroad. The Morris Code is: **D - · · O- - - N - · E ·.** How many times did the messenger have to tap the telegraph transmitter?	